Objectives: To evaluate the cost-effectiveness of propofol compared to midazolam in mechanically ventilated (MVd) critically ill adult patients. PERSPECTIVE OF THE ANALYSIS Brazilian private health care system. ***Methods:*** A decision tree model was built to reflect the hospitalization of a MVd critically ill clinical patient. The time horizon was that of a ICU hospitalization, and the outcomes were cost effectiveness per hour of reduced ICU stay and cost effectiveness per hour of MV avoided. Data to populate the model came from a meta-analysis. The model was built based on the meta-analytic difference in the mean length of ICU stay and MV time. It was established that the cost of medication was embedded in the ICU cost, and that the daily ICU cost was the same in both arms. Univariate and probabilistic sensitivity analysis was performed. ***Results:*** Propofol use in MVd critically ill adult patients decreased ICU stay in 47.97 hours and 21.65 hours of MV. There was a cost reduction of R$ 4,397.25 when compared to midazolam. The cost-effectiveness per hour of ICU stay and MV time avoided was dominant in 94.70% and in 80.87% of the time, respectively. ***Conclusions:*** Propofol may be the preferred choice for mechanically ventilated critically ill adult patients, reducing ICU stay and MV time.

PNS30
COST-EFFECTIVENESS MODELING FRAMEWORK FOR MATCHING-ADJUSTED-INDIRECT-COMPARISONS IN THE PRESENCE OF CURE ESTIMATES

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Objectives: Assessing cost-effectiveness for new interventions against comparators for which only single-arm trials are present raises some methodological issues. Methods like Matching-Adjusted-Indirect-Comparisons (MAIC) "align" the population characteristics across the interventions within the trials, hence provide a framework for head-to-head indirect comparison. The presence of potential cures raises further issues. ***Methods:*** We apply a sequential statistical framework consisting of the following steps: estimate the patient-specific weights for the intervention of interest with a MAIC approach, returning a set of patient-specific weights for the population of the intervention of interest adjusted to the population of the relevant comparator; apply cure-estimations on the weighted intervention of interest - via a weighted maximum likelihood approach - and on the unweighted comparators; include options in the cost-effectiveness model to allow for the selection of the relevant parameters (e.g. coefficients of parametric extrapolations, cure estimates etc) of interest. ***Results:*** Our sequential approach offers the opportunity to assess the cost-effectiveness of a new intervention against a pool of comparators in the absence of a connected network of indirect comparisons. The user can select pairs of treatments and determine the relative cost-effectiveness of one versus the other. Furthermore, the estimation of uncertainties around the parameter estimates (inflated because of the effective sample size resulting from the population-matching exercise) provide a valuable tool to perform Probabilistic Sensitivity Analyses. ***Conclusions:*** Although we are modifying the population of the intervention within the trial to match the one of the comparators selected, we are providing a solid framework to assess the relative efficacy of a new intervention. Current limitations of the approach include: the inability to assess the cost-effectiveness plane as a whole, as the baseline characteristics are adjusted for each pairs of comparators chosen; high variations in the relative effectiveness due to shrinking the effective sample size with the MAIC exercise.

PNS31
OUT-OF-POCKET HEALTH EXPENDITURES IN COLOMBIA: A SYSTEMATIC REVIEW

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Objectives: To review the evidence of out-of-pocket (OOPE) and catastrophic expenditures (CHE) in health in Colombia. ***Methods:*** Systematic review of the literature (SLR). Searches were performed in PubMed, Scopus, Scielo and Google Scholar. We used the MESH terms: out-of-pocket, catastrophic health expenditure, health and Colombia. We included cost description or cost analysis studies. Cost-effectiveness analysis of health technologies and qualitative studies were excluded. Data about period of analysis, type of study, costing perspective, OOPE, and CHE were extracted. Studies were classified as macroeconomic, microeconomic, and diseases analysis. All costs were indexed to 2018 and reported in Colombian pesos (COP). ***Results:*** We found 44 studies, 15 were duplicated. Twenty full-text papers were revised and 17 were finally included. Six studies were prospective, seven from patient perspective and four from societal perspective. Only five studies estimated CHE. Macroeconomic analysis: between 1993-2011, the average OOPE was 18% of total health expenditure and 1.1% of Colombian GDP. Microeconomic analysis: Amaya (2016) identified Pacific region as the most vulnerable, with a CHE of 16,9%, ten percentage points higher than Bogotá (lowest CHE). If a woman was head of household, their OOPE increased by 14%. Members of the households at extreme ages augmented the OOPE; if they were children under-5, health expenses increased by 15%, and if they were elderly, by 21%. Disease analysis: OOPE of Chikungunya (3.3% out of the total costs of the disease), HIV (monthly OOPE in antiretroviral therapy: COP$237.153), dengue (OOPE of COP$54.672 per hospitalization), and arterial hypertension (COP$44.548 per cardiac rehabilitation session). ***Conclusions:*** OOPE and CHE are not frequently estimated in Colombian health economic studies. Documents reviewed reflect the heterogeneity of the studies. Data sources do not offer availability of data over the time and non-standardized methodologies were frequent.

PNS32
PREDICTED COST-BENEFIT OF A PHARMACY INVENTORY MANAGEMENT PROGRAM FOR US ACUTE-CARE HOSPITALS

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Objectives: Over $27 million is spent by US hospitals on annual drug spend. Roughly 20% of hospital drug inventory is wasted or expires each year. Additionally, 50% of hospitals report manual drug inventory management methods. We created a cost-benefit model to predict the impact of a pharmacy management predictive analytics software on inventory costs. ***Methods:*** A cost-benefit model was created using Microsoft Excel to predict the economic impact of a pharmacy management predictive analytics software. Predicted benefit was calculated using a combination of drug cost data and drug utilization data. Three areas of cost-benefit were assumed: inventory reduction in patient care areas and central pharmacy, respectively, and reduction in wasted medication from more efficient management of min/max inventory levels. Inventory reduction was assumed to be a one-time cost-benefit, whereas savings due to waste reduction were repeated yearly. Cost was defined as the cost of the predictive analytics program. We analyzed cost-benefit over a five-year period using a large cohort of US acute-care hospitals. ***Results:*** 61 acute-care hospitals were included in the cost-benefit analysis. The majority were located in the southeast (64%), had a bed size of 101-250 beds (44%), and were non-academic (39%). The model estimated annual medication spend ranging from $335,551 - $309,712,416 (median=$6,853,533). Ranges of estimated inventory reductions in patient care areas and central pharmacy were $3,000-$569,000 (median=$56,000) and $0-$1,851,000 (median=$13,500), respectively. Median projected yearly savings from waste reduction were $63,000 ($8,000-$1,443,000). Over a five-year period, cumulative cost-benefit rose from a median of $101,000 (year one) to $344,185 (year five). Estimated median ROI from adopting the intervention at year one and year five was 2.52 and 3.0, respectively. ***Conclusions:*** Predicted cost savings with the use of an analytics program potentially led to a five-year cumulative cost-benefit of $344,185 and a five-year ROI of 3.0. Future research should be performed to assess true/actual cost-benefit.

PNS33
THE IMPACT OF ALTERNATIVE WEIGHTING METHODOLOGIES ON CROSS-INDICATION VALUE-BASED PRICING ESTIMATES

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Objectives: For drugs approved in multiple conditions, current product-specific pricing frameworks struggle to reflect differences in efficacy and value across indications accurately. Value-based pricing (VBP) approaches based on a drug's value in a single indication (e.g., first approval, minimum value) may negatively affect patients' access to effective therapies in other indications (e.g., payers restricting coverage, manufacturers forgoing new indications). Health technology appraisal bodies have responded by recommended a weighted-average VBP approach. This study aims to demonstrate the impact of alternative weighting methodologies on cross-indication VBP estimates. ***Methods:*** We considered three weighting methods: (1) based on the incidence of each indication, (2) based on the number of patients using the drug for each indication (reflecting incidence and market share), and (3) based on the total drug utilization for each indication (reflecting incidence, market share, and drug utilization per patient). To demonstrate the use of these methods, we considered a hypothetical drug approved in four indications. For each indication, incidence rates (5, 3, 1, and 0.5 per 1,000 individuals), market shares for the drug (10%, 60%, 90%, and 40%), average lifetime utilization per patient (40, 20, 60, and 80 units), and VBP estimates for the drug ($2,500, $500, $1,000, and $4,000 per unit) were assumed. ***Results:*** In this example, the cross-indication VBP estimates for the hypothetical drug using the three weighting methods were $1,789, $1,132, and $1,476 per unit, respectively. Compared with strictly incidence-based weights, incorporating market share resulted in a 37% reduction in the weighted VBP estimate while incorporating market share and drug utilization resulted in a smaller 18% reduction in the weighted VBP estimate. ***Conclusions:*** This study underscores the challenges in capturing the true value to health care systems of drugs with multiple indications and highlights the importance of including epidemiology, market share, and drug utilization in cross-indication VBP estimates.

PNS34
HEALTH PLAN PAID COST DRIVERS IN SANTA CATARINA, SOUTHERN BRAZIL

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